|  |  |  |
| --- | --- | --- |
|  | Pre-DM | Diabetes |
| A1c | 5.7 – 6.4% | ≥ 6.5% |
| Fasting Glucose | 100 - 125 | ≥ 126 |
| 2h GTT (75g) | 140 – 199 | ≥ 200 |
| Random Glucose |  | ≥ 200 + symptoms |

**Outpatient care of diabetes**

**Classification:**

* Type 1 = B-cell destruction -> absolute insulin deficiency (0.23% of US children)
* Type 2 = insulin resistance -> relative insulin deficiency (5.8-12.9% US adults)
* Gestational Diabetes = insulin resistance in setting of pregnancy

**Symptoms:** polyuria, polydipsia, nocturia, DKA, but usually asymptomatic

**Diagnosis**: see table for criteria. Who to screen:

**Risk Factors**

Physical inactivity

First degree relative with diabetes

High risk race/ethnicity (African American, Latino, Native American, Asian America, Pacific Islander)

Women who delivered a baby weighing ≥ 9lbs or were diagnosed with GDM

Hypertension (≥140/90 or on therapy for hypertension

HDL <35 and/or TG>250

Women with PCOS

History of CVD

History of pre-diabetes

* Adults: every 3 years at minimum more frequently if higher risk
  + BMI ≥ 25 (≥ 23 in Asian Americans) and risk factors (see table)
  + Age ≥ 45
* Pediatrics: Age ≥10 or after onset puberty if BMI >85%ile plus any 2 of the following:
  + - * 1st or 2nd degree relative with DM2
      * High risk ethnicity
      * Signs of insulin resistance (acanthosis nigricans, HTN, HLD, PCOS, SGA)
      * Maternal hx DM or GDM

**Pre-Diabetes Treatment and Follow-Up**

* Intensive diet and physical activity counseling, targeting 7% weight loss
* Consider Metformin
* Monitor yearly for Diabetes
* Screen for modifiable risk factors for CVD

**Vaccinations for Diabetics**

Influenza yearly

PPSV23 to all ≥2years

Adults ≥65, if not previously vaccinated, should receive PCV13 followed by PPSV23 6-12 months later

Adults ≥65, if previously vaccinated, should receive PCV13 followed by PPSV23 6-12 months later if it has been 5-years since last dose

Vaccinate against Hep B if unvaccinated

**Diabetes Treatment and Follow-Up**

* **Lifestyle:**
  + Carbohydrate management
  + Weight loss (2-8kg weight loss may provide clinical benefit)
  + Physical activity (150min /wk mod-intensity aerobic physical activity)
  + Smoking Cessation
  + Screen and treat depression
* **Glycemic control:**
  + **A1c Goals:**
    - **Pediatrics <7.5%** (lower goal of <7% reasonable if can be achieved without excessive hypoglycemia)
    - **Standard <7%** [Fasting 80-130; Postprandial <180] : ↓ microvascular complications, ↓ macrovascular disease
    - **Stringent (eg<6.5%)** if can be achieved without adverse effects for select patients
    - **Less stringent (eg<8%)** for patients with a lot to lose and/or little to gain from glycemic control:
  + **Pharmacologic therapy**
    - DM1: long-acting + prandial insulin ; add metformin if overweight / increasing insulin requirements
    - DM2: Start with metformin, then add other agents sequentially
      * Per FDA, Metformin contraindicated serum Cr levels ≥1.5 (males) or ≥1.4 (females) or abnormal CrCl
      * Recent JAMA article proposes approach to giving metformin at reduced doses for eGFR 30-60 (see table)

Macrovascular

* **HTN** **management**
  + goal <140/90 (consider goal 130/80 for young pt if achieved without harm)
  + Include ACE/ARB

**Labs for Diabetics**

A1c every 3mo, every 6mo once at goal

Urine albumin: Cr ratio – yearly; if elevated >300mg/d -> treat with ACEi or ARB

Fasting lipids yearly

Cr yearly -> calculate GFR

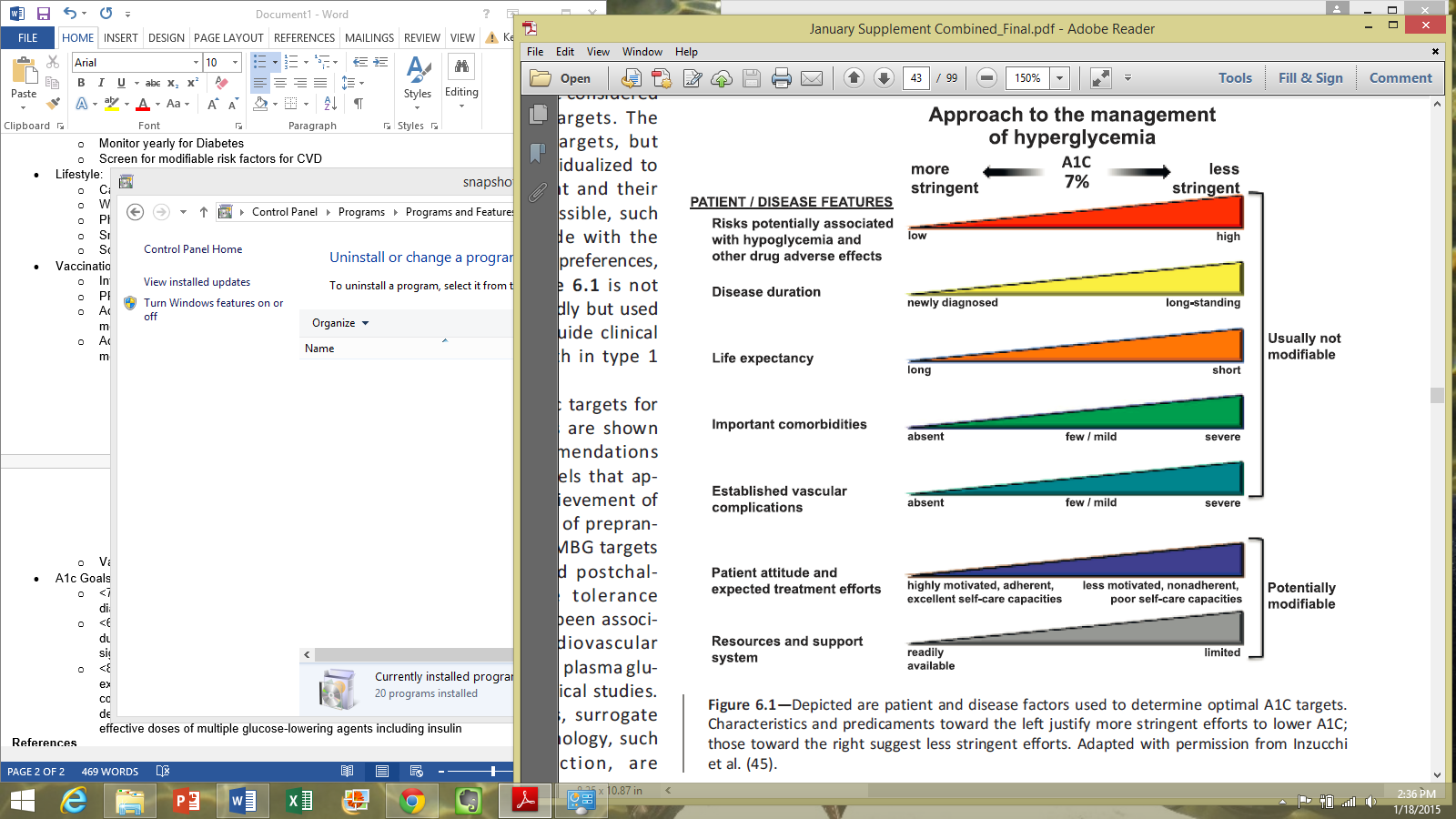
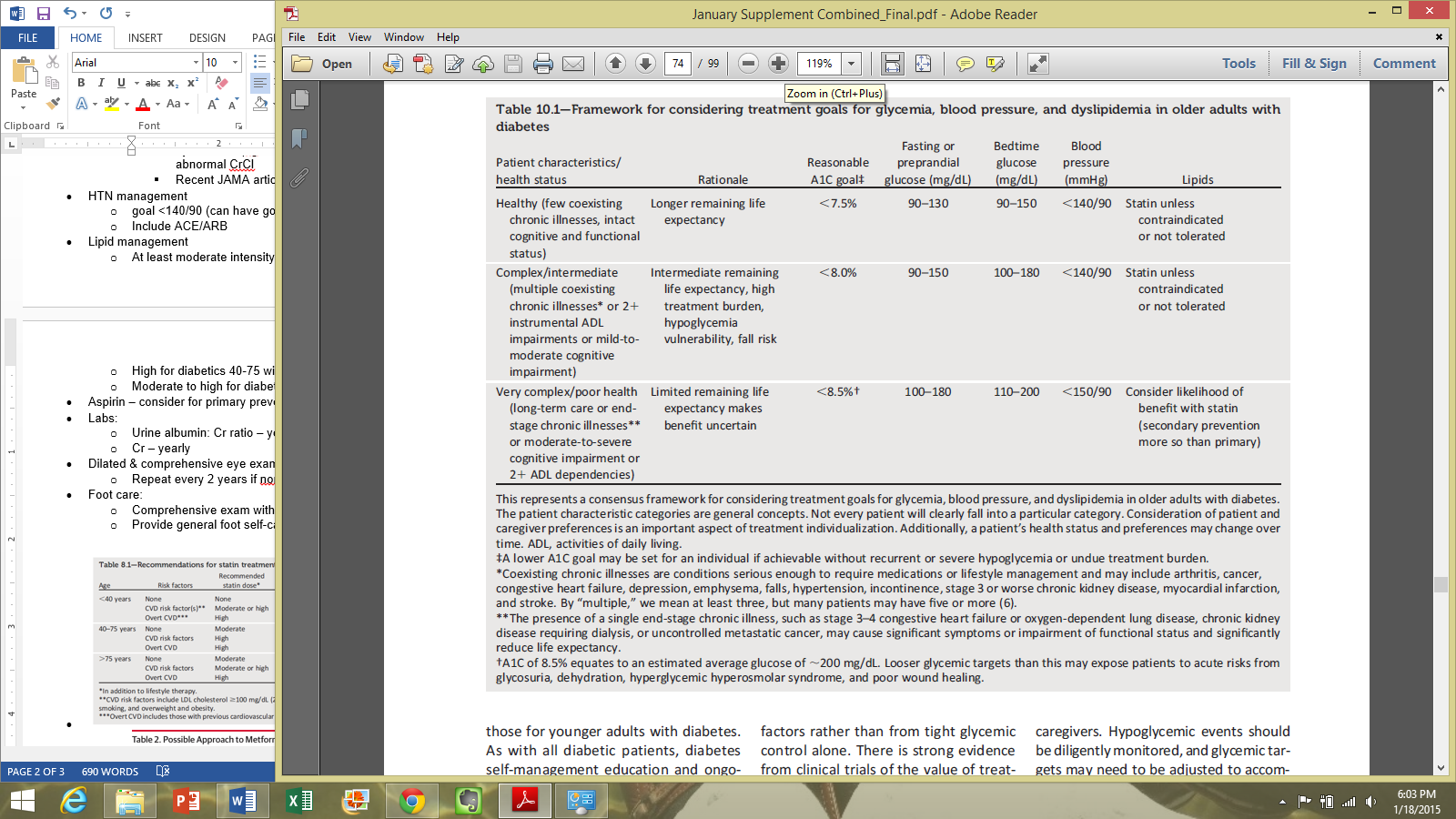
LFTs yearly

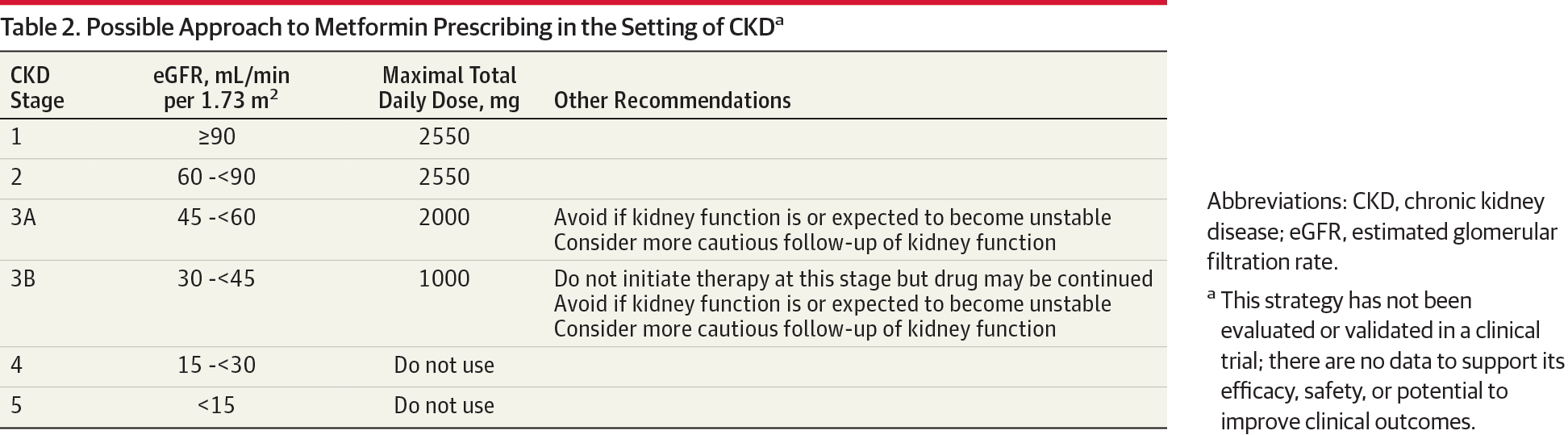
TSH in DM1, dyslipidemia, or women>50y

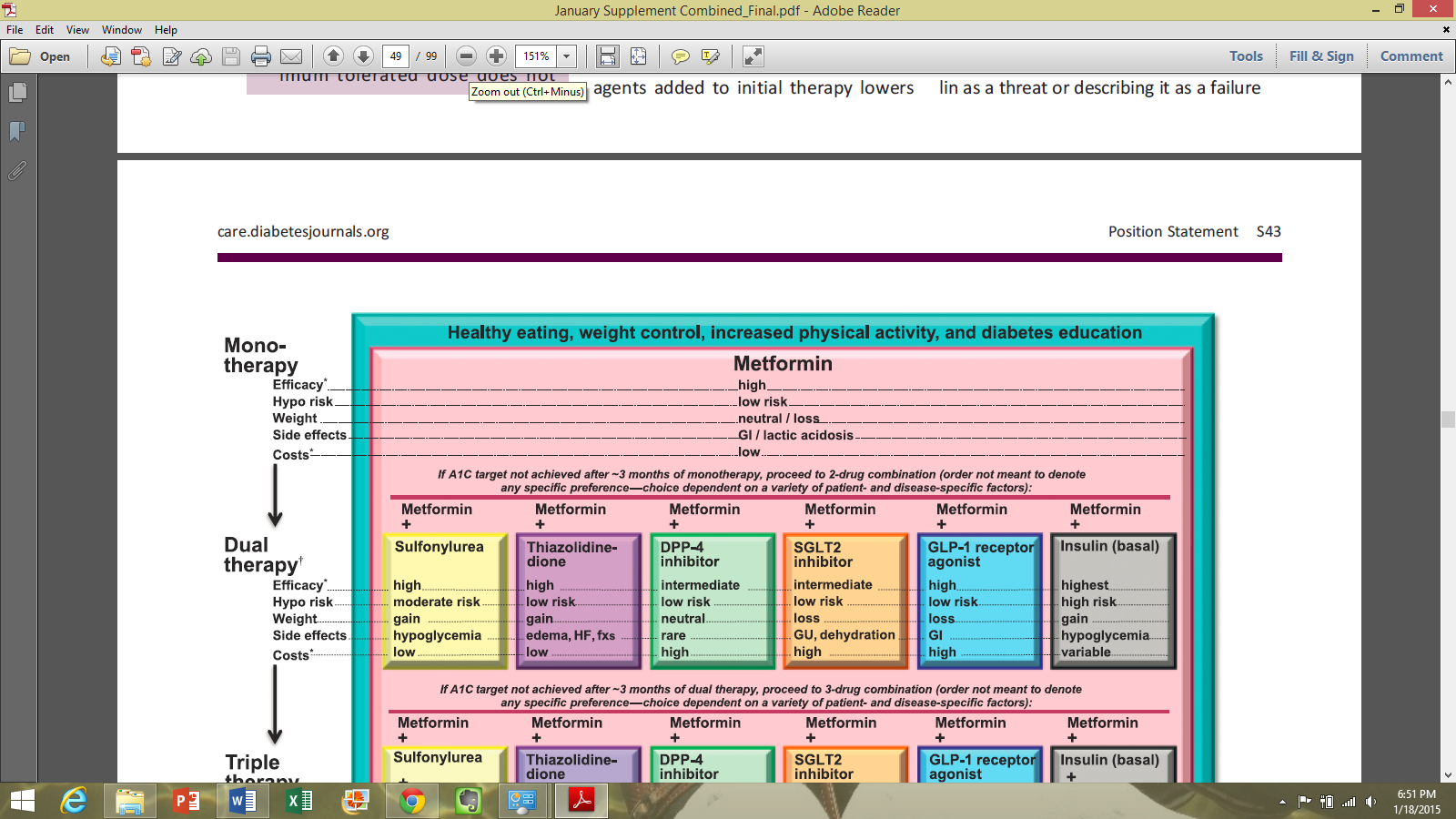
* **Lipid management**
* At least moderate intensity statin for ALL diabetics >40
* High for diabetics 40-75 with risk factors or anyone with overt CVD
* Moderate to high for diabetics <40 or >75 with risk factors

Microvascular

* **Aspirin** – consider for primary prevention in those with 10-year CVD >10%
* **Eye care:** Dilated eye exam within 5 years of diagnosis of DM1 and at diagnosis DM2. Repeat every 2 years if normal, if diabetic retinopathy, repeat annually
* **Foot care:** Yearly comprehensive exam with pulses, inspection, monofilament exam. Provide general foot self-care education to all patients
* **Family planning** for women of reproductive age (OCPs category 3 - 4 if nephropathy/retinopathy/neuropathy, vascular disease, or DM>20year duration, otherwise OCPs categeory 2, other methods 2 except for copper IUD which is a 1)







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